Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A compound comprising a recombinant nucleic acid encoding an antiangiogenic protein operatively linked to an adenovirus signal sequence inserted within a viral nucleic acid, wherein the recombinant nucleic acid can be packaged in a virus particle and wherein expression of the recombinant nucleic acid encoding the antiangiogenic protein results in production of the antiangiogenic protein.

2. (Original) The compound of claim 1, wherein the viral nucleic acid comprises an adenovirus nucleic acid.

3. (Original) The compound of claim 1, wherein the viral nucleic acid comprises a retroviral nucleic acid.

4. (Original) The compound of claim 1, wherein the antiangiogenic protein comprises endostatin.

5. (Original) The compound of claim 1, wherein the antiangiogenic protein comprises thrombospondin.

6. (Original) The compound of claim 1, wherein the antiangiogenic protein comprises EMAP-II

7. (Original) The compound of claim 1, wherein the antiangiogenic protein comprises IP-10.

8. (Original) The compound of claim 1, wherein the antiangiogenic protein comprises angiostatin.

9. (Original) The compound of claim 1, wherein the antiangiogenic protein comprises vasostatin.

10. (Original) The compound of claim 1, wherein the antiangiogenic protein comprises vasculostatin.

11. (Original) The compound of claim 1, wherein the antiangiogenic protein comprises IL-12.

12. (Original) The compound of claim 1, wherein the antiangiogenic protein comprises platelet factor 4.

13. (Original) The compound of claim 1, wherein the antiangiogenic protein comprises cleavage products of collagen VIII.

14. (Original) The compound of claim 1, wherein the antiangiogenic protein comprises cleavage products of collagen XV.

15. (Original) The compound of claim 1, wherein the antiangiogenic protein comprises restatin.

16. (Original) The compound of claim 2, wherein the recombinant nucleic acid is replication deficient.

17. (Original) The compound of claim 3, wherein the recombinant nucleic acid is replication deficient.

18. (Original) An adenovirus comprising the compound of claim 2.

19. (Original) A retrovirus comprising the compound of claim 3.

20. (Cancelled)

21. (Currently Amended) The compound of claim ~~20~~ 1, wherein the signal sequence comprises the adenovirus E19 signal sequence.

22. (Original) The signal sequence of claim 21, wherein the sequence encodes an amino acid sequence comprising the amino acid sequence MRYMILGLLALAAVCSAA.

23. (Original) A method of delivering an antiangiogenic protein to a cell comprising administering to the cell the adenovirus of claim 18 or the retrovirus of claim 19, whereby

expression of the recombinant nucleic acid produces the antiangiogenic protein, thereby delivering the antiangiogenic protein to the cell.

24. (Original) The method of claim 23, wherein the cell is administered the antiangiogenic protein *ex vivo*.

25. (Original) The method of claim 23, wherein the cell is administered the antiangiogenic protein *in vivo*.

26. (Original) The method of claim 23, wherein the cell is administered the antiangiogenic protein *in culture*.

27. (Original) The method of claim 23, wherein the cell is a human hepatocyte.

28. (Original) The method of claim 23, wherein the cell is a lung cell.

29. (Currently amended) A method of delivering an antiangiogenic protein to a subject comprising administering to the subject the adenovirus of claim ~~3~~ 2, whereby a cell of the subject expresses the recombinant nucleic acid encoding the antiangiogenic protein, thereby delivering the antiangiogenic protein to the subject.

30. (Original) A method of treating a tumor in a subject comprising administering to the subject the adenovirus of claim 18 or the retrovirus of claim 19, whereby a cell in the subject expresses the recombinant nucleic acid encoding the antiangiogenic protein and produces the antiangiogenic, thereby treating the tumor.

31. (Original) A method of producing an antiangiogenic protein comprising administering to a cell the adenovirus of claim 18 or the retrovirus of claim 19, whereby expression of the recombinant nucleic acid produces the antiangiogenic protein.

32. (Original) A method of screening an antiangiogenic protein for bioactivity, comprising

a. administering to a first cell a virus containing a recombinant nucleic acid encoding the antiangiogenic protein, wherein the first cell expresses the recombinant nucleic acid encoding the antiangiogenic protein and thereby produces the antiangiogenic protein;

b. contacting a second cell with the antiangiogenic protein; and

c. monitoring the second cell for a biological response to the antiangiogenic protein, thereby screening the antiangiogenic protein for bioactivity.

33. (Original) The method of claim 32, wherein the antiangiogenic protein is harvested from the first cell before the second cell is contacted with the antiangiogenic protein.

34. (Original) The method of claim 32, wherein the first cell producing the antiangiogenic protein is administered to the second cell.

35. (Original) The method of claim 32, wherein the first cell and the second cell are of the same cell type.

36. (Original) The method of claim 32, wherein the first cell and the second cell are of a different cell type.

37. (Currently Amended) A protein comprising an antiangiogenic protein and an adenovirus signal sequence.

38. (Cancelled)

39. (Currently Amended) The protein of claim ~~38~~ 37, wherein the adenovirus signal sequence is the adenovirus E19 signal sequence.